



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,987	09/22/2003	Tarang Luthra	99990-053001	1756

20985 7590 03/21/2007  
FISH & RICHARDSON, PC  
P.O. BOX 1022  
MINNEAPOLIS, MN 55440-1022

EXAMINER
----------

HAROON, ADEEL

ART UNIT	PAPER NUMBER
----------	--------------

2618

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/21/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/668,987	LUTHRA, TARANG	
	<b>Examiner</b>	<b>Art Unit</b>	
	Adeel Haroon	2618	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 7-13, 15-20 and 22-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-13, 15-20, and 22-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/22/07 has been entered.

### ***Response to Arguments***

2. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2618

4. Claims 1-5, 7-13, 15-20, and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beaudin et al. (U.S. 6,853,694) in view of Love et al. (U.S. 2004/0253955).

With respect to claim 1, Beaudin et al. disclose a method of receiving a plurality of signal inputs from a plurality of antenna elements (Column 2, lines 54-57). Beaudin et al. teach determining signal strengths of the plurality of signal inputs (Column 2, lines 57-60). Beaudin et al. also disclose determining a combination of the plurality of signal inputs to combine in a combined signal, the combination having a number of signal inputs that is less than all of the plurality of signal inputs (Column 2, line 60 – Column 3, line 4). Beaudin et al. do not teach operating this method in response to a reduced power consumption selection. However, Love et al. teach receiving a plurality of signal inputs and using diversity mode based on reduced power consumption selection mode (Paragraph 31). Love et al. teach using less signal inputs when reduced power consumption selection mode is selected as compared to using all signal inputs when reduced power consumption selection mode is not selected (Paragraph 34). Therefore, it would be obvious to one of ordinary skill in the art to apply the power conservation teachings of Love et al. to the method of Beaudin et al. in order “to save power consumption and improve battery life” (Paragraph 34).

With respect to claim 2, Beaudin et al. further disclose outputting the combined signal to a user device (Column 6, lines 44-49).

With respect to claim 3, Beaudin et al. further disclose a wireless network (Column 6, lines 44-49).

With respect to claim 4, Beaudin et al. teaches using the method for data signals (Column 1, lines 6-7), but does not expressly disclose a computer. However, the examiner takes Official Notice that a computer processing data signals is well known in the art. Therefore, it would be obvious to one of ordinary skill in the art to include a computer as the user device in Beaudin et al.'s method in order to provide a computing device to handle the data signals.

With respect to claim 5, Beaudin et al.'s method will result in combined signal strength greater than any of the signal strengths of the plurality of inputs (Column 2, line 60 – Column 3, line 4).

With respect to claims 7 and 8, Beaudin et al. further teach the capability of handling more than three inputs (Column 3, lines 56-63), but do not expressly disclose five signal inputs and the combined signal comprising three inputs. However, it would be obvious to one of ordinary skill in the art to use five signal inputs and correspondingly a combined signal comprising three inputs in order to be compatible with certain system requirements.

With respect to claim 9, Beaudin et al. disclose an article comprising a machine-readable medium including machine-executable instructions for receiving a plurality of signal inputs from a plurality of antenna elements (Column 2, lines 54-57). Beaudin et al. teach determining signal strength of the plurality of signal inputs (Column 2, lines 57-60). Beaudin et al. also disclose determining a combination of the plurality of signal inputs to combine in a combined signal, the combination having a number of signal inputs that is less than all of the plurality of signal inputs based on a selection of

Art Unit: 2618

reduced power consumption (Column 2, line 60 – Column 3, line 4). Beaudin et al. do not teach operating this method in response to a reduced power consumption selection. However, Love et al. teach receiving a plurality of signal inputs and using diversity mode based on reduced power consumption selection mode (Paragraph 31). Love et al. teach using less signal inputs when reduced power consumption selection mode is selected as compared to using all signal inputs when reduced power consumption selection mode is not selected (Paragraph 34). Therefore, it would be obvious to one of ordinary skill in the art to apply the power conservation teachings of Love et al. to the method of Love et al. in order “to save power consumption and improve battery life” (Paragraph 34).

With respect to claim 10, Beaudin et al. further disclose outputting the combined signal to a user device (Column 6, lines 44-49).

With respect to claim 11, Beaudin et al. further disclose a wireless network (Column 6, lines 44-49).

With respect to claim 12, Beaudin et al. teaches using the method for data signals (Column 1, lines 6-7), but does not expressly disclose a computer. However, the examiner takes Official Notice that a computer processing data signals is well known in the art. Therefore, it would be obvious to one of ordinary skill in the art to include a computer as the user device in Beaudin et al.’s method in order to provide a computing device to handle the data signals.

With respect to claim 13, Beaudin et al.'s method will result in combined signal strength greater than any of the signal strengths of the plurality of inputs (Column 2, line 60 – Column 3, line 4).

With respect to claims 15 and 16, Beaudin et al. further teach the capability of handling more than three inputs (Column 3, lines 56-63), but do not expressly disclose five signal inputs and the combined signal comprising three inputs. However, it would be obvious to one of ordinary skill in the art to use five signal inputs and correspondingly a combined signal comprising three inputs in order to be compatible with certain system requirements.

With respect to claim 17, Beaudin et al. disclose a system receiving a plurality of signal inputs and storage medium for storing executable instructions and data (Column 2, lines 54-57). Beaudin et al. teach processor determining signal strength of the plurality of signal inputs (Column 2, lines 57-60). Beaudin et al. also disclose determining a combination of the plurality of signal inputs to combine in a combined signal, the combination having a number of signal inputs that is less than all of the plurality of signal inputs based on a selection of reduced power consumption (Column 2, line 60 – Column 3, line 4). Beaudin et al. do not teach operating this method in response to a reduced power consumption selection. However, Love et al. teach receiving a plurality of signal inputs and using diversity mode based on reduced power consumption selection mode (Paragraph 31). Love et al. teach using less signal inputs when reduced power consumption selection mode is selected as compared to using all signal inputs when reduced power consumption selection mode is not selected

Art Unit: 2618

(Paragraph 34). Therefore, it would be obvious to one of ordinary skill in the art to apply the power conservation teachings of Love et al. to the method of Love et al. in order “to save power consumption and improve battery life” (Paragraph 34).

With respect to claim 18, Beaudin et al. further disclose a plurality of antenna elements (Column 2, lines 54-57).

With respect to claim 19, Beaudin et al. further disclose outputting the combined signal to a user device (Column 6, lines 44-49).

With respect to claim 20, Beaudin et al.’s method will result in combined signal strength greater than any of the signal strengths of the plurality of inputs (Column 2, line 60 – Column 3, line 4).

With respect to claim 22, Beaudin et al. further teach the capability of handling more than three inputs (Column 3, lines 56-63), but do not expressly disclose five signal inputs and the combined signal comprising three inputs. However, it would be obvious to one of ordinary skill in the art to use five signal inputs and correspondingly a combined signal comprising three inputs in order to be compatible with certain system requirements.

With respect to claims 23-25, Beaudin et al. disclose determining the signal strength of each of the signal inputs, sorting the signal inputs according to the signal strengths, and selecting only some of the signals based on the signal strengths (Column 2, line 60 – Column 3, line 4). Beaudin et al. do not expressly disclose using signal-to-noise ratios for this function. However, signal-to-noise ratios are extremely well known as signal strength indicators. Therefore, it would be obvious to one of ordinary skill in

Art Unit: 2618

the art to use signal-to-noise ratios in Beaudin et al.'s system since signal-to-noise ratio is a signal strength indicator.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adeel Haroon whose telephone number is (571) 272-7405. The examiner can normally be reached on Monday thru Friday, 8:30 a.m. - 5:00 p.m..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 2618

AH

3/13/07



EDWARD F. URBAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600